



# UNITED STATES PATENT AND TRADEMARK OFFICE

24  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,555	02/10/2004	Nicholas V. Nechitalo	84629	9517
23501	7590	09/06/2005	EXAMINER	
NAVAL SURFACE WARFARE CENTER, DAHLGREN DIVISION OFFICE OF COUNSEL, CODE XDC1 17320 DAHLGREN ROAD DAHLGREN, VA 22448-5110			CHAMBERS, TROY	
		ART UNIT		PAPER NUMBER
				3641

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/779,555	NECHITAILO, NICHOLAS V.	
	Examiner Troy Chambers	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 July 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,7,12-14,20-25,30-32,34,35,37 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,7,12-14,20-25,30-32,34,35,37,39 and 42 is/are rejected.
- 7) Claim(s) 40, 41 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Species A, I, N and P (claims 1, 7, 12-14, 20-25, 30-32, 34, 35, 37 and 39-42 in the reply filed on 07/11/05 is acknowledged.
2. Claims 2-6, 8-11, 15-19, 26-29, 33, 36, 38 and 43-47 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 07/11/05.

### *Information Disclosure Statement*

3. The IDS statement filed on 02/10/04 and consisting of one page has been acknowledged.

### *Drawings*

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the solid shape comprising a cylinder and a sphere must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

5. Claims 1, 7, 23 and 34 (and claims depending therefrom) are objected to because of the following informalities: The recited claims make reference to a reactive composite having "a solid shape". Whether an object is solid or liquid or gas is independent from its shape. Hence, the applicant should amend the claims to recite, for example, "solid form". Appropriate correction is required.

#### ***Specification***

6. The disclosure is objected to because of the following informalities: "solid shape" should be amended as discussed above in the Claim Objections section.  
  
Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 7, 20, 23 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3961576 issued to Montgomery.
9. With respect to claims 1, 7 and 20, Montgomery discloses a reactive metal mixture 13, 14, 15 compressively encased (col. 1, ll. 44-48) in material 11.
10. With respect to claims 23 and 30, Montgomery discloses a reactive composite material in solid shape 11 (the case 11 is aluminum and reactive [col. 2, line 68; col. 3, line 33]) and an elongate structure 13, 14, 15 having a mass density approximately 2 to 10 times the mass of the material 11 (if the casing is aluminum Al then the thermite AL-Fe<sub>2</sub>O<sub>3</sub> would inherently have a mass density that is greater than (or “approximately”) 2 times greater than Al alone). Moreover, the density of the powdered thermite is a function of the compacting pressures applied to it and is therefore configurable such that a mass density 2 to 10 times of aluminum is capable (col. 2, ll. 38-67).
11. Claims 1, 7, 12, 13, 14, 23, 24, 25, 34, 35, 37, 39 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 4671181 issued to Romer.
12. With respect to claims 1 and 7, Romer discloses a reactive composite material 3 comprised of steel (col. 2, ll. 48-50) and a casing 8. The casing 8 compresses the material 1 via the threaded connection.
13. With respect to claim 12, Romer discloses an elongate structure 1 positioned in said solid shape material 3. The structure is comprised of tungsten (col. 2, ll. 60-64) which has a much higher density than the steel material 3.

14. With respect to claims 13 and 14, Romer discloses an elongate structure 1 with fins (threads).

15. With respect to claims 23-25, refer to the rejection of claims 1, 7, 12, 14 and 14.

16. With respect to claim with respect to the rejection of claims 34, 35 and 37, refer to the rejection of claims 1, 7, 12, 13, 14, 23, 24 and 25.

17. With respect to claim 39, refer to claim 1 which shows the solid shape material in the form of an open cylinder.

18. With respect to claim 42, Romer discloses an encasement material 8 which applies compressive forces via threading.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 21, 22, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montgomery. Montgomery discloses a reactive composite projectile as discussed above. However, Montgomery has not disclosed a reactive material having a solid shape of a cube or sphere. At the time of the invention, one having ordinary skill in the art would have found it obvious to provide a reactive material with the shape of a cube or sphere since it has been held that such changes in configuration is a matter of design choice and a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed

Art Unit: 3641

container was significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). The applicant's specification does not disclose that a cube or sphere shape would produce results different from one that is cylindrical.

***Allowable Subject Matter***

21. Claims 40 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited on form PTO-892 are cited as of interest to show similar reactive composite projectiles.

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (571) 272-6874 between the hours of 7:00 a.m. to 3:30 p.m., M-F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (571) 272-6873.

Troy Chambers, Examiner

Art Unit 3641

A handwritten signature in black ink, appearing to read "Troy Chambers".